

Project Design Phase-I
Proposed Solution Template

Date	29 September 2022
Team ID	PNT2022TMID27475
Project Name	Project - Retail Store Stock Inventory Analytics
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The problem faced by many companies is that they do not have any systematic system to record and keep their inventory data. It is difficult for the admin to record the inventory data quickly and safely because they only keep it in the logbook and not properly organized. Even if they have a systematic method to store and manage inventory but to maximize profit one must calculate the stock needed in advance so that the company doesn't over pile the materials/ resources.To achieve this we must answer some questions : How much inventory should I carry? Too much inventory means working capital costs, operational costs and a complex operation, lack of inventory leads to lost sales, unhappy customers and a damaged brand. As a result, short-term forecasting is so crucial to the retail and consumer goods industries.
2.	Idea / Solution description	The purpose of retail store stock inventory analytics is to analyze historical sales data of a retailer.To create meaningful dashboards and visualize stock inventory, we use Python libraries like pandas and IBM Cognos analytics to understand the dataset, identify patterns, relationships, and connections.Providing detailed product listings, easy categorization, inventory reports that satisfy customer needs and meet variation in product demand is the goal of the dynamic dashboard.
3.	Novelty / Uniqueness	Analysis of the sales ratio and determination of stock availability are part of this solution.Additionally, it determines the most popular products among customers and the retailer of out-of-stock commodities.For visualisation, IBM Cognos analytics tool is used rather than Python libraries like Matplotlib

4.	Social Impact / Customer Satisfaction	Profits can be increased by optimizing investments.
5.	Business Model (Revenue Model)	Streamline the decision-making process to reduce costs and increase revenues. Customers' deepest needs are understood by retailers, and they adjust their offering accordingly
6.	Scalability of the Solution	Whether you own a small retail store or a large department store, this solution is suitable for you. Additionally, it is capable of analyzing a wide range of datasets and visualizing them in different ways.